

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

THREE NEW SUBSPECIES AND FIGURES OF FIVE
PREVIOUSLY UNFIGURED SPECIES OF *CINARA*
(APHIDAE)

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Sooner or later every taxonomist comes across specimens which present some variation from the typical forms of described species. Such is the case of the three forms described herewith. Had these forms been observed critically enough when alive, had more material been collected, or had an opportunity to follow the life cycle been afforded, they might have been described as species. For the present it may suffice to describe them briefly as subspecies and call attention to their variations.

Cinara villosa (G&P) subspecies *parvavillosa* n. subspecies.

This form which is described as a new subspecies of *C. villosa* differs from typical specimens of that species, in the vastly fewer number of hairs on the abdomen of both the alate and apterous viviparous females, the hairs are not only fewer in number, but are finer and somewhat shorter, than those of the typical form. There are also fewer hairs on the antennae, and the fourth segment of the rostrum is slightly shorter.

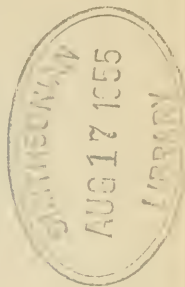
Holotype apterous viviparous female, taken on *Pinus flexilis* var *reflexa* June 13, 1954, Summerhaven, Arizona. Morphotype alate viviparous female, George D. Butler, Jr., Summerhaven, Arizona, May 31, 1954. Both types deposited in the United States National Museum.

What has been determined as the typical form of *C. villosa* has been taken in the same region on the same host. The host of *C. villosa* as known from Colorado is *Pinus flexilis*.

Cinara villosa (G&P) and *Cinara wahtolca* H. are allied species, in fact, *C. wahtolca* may be keyed with only minor difficulties to *C. villosa* in Palmer's key to the genus *Cinara* in "Aphids of the Rocky Mountain Region." In life the two species are vastly different. *Cinara hirsuta* H&E is also allied to these two species, but *hirsuta* has much longer hair. All three species have similar pigmented spots posterior to the cornicles, but these are less frequent in specimens of *villosa*. Taxonomists who "see" only these, are in for difficulty. *C. hirsuta* will not key to *villosa* in Palmer's key, because of the length of hair. Couplets 17, 18 and 22 are apt to offer difficulties in the keying of some specimens of *wahtolca*. *C. wahtolca* has fewer hair on the tibiae.

Cinara wahtolca H. subspecies *curtiwahtolca* n. subspecies.

Apterous viviparous females of this form, in life, apparently are enough similar to the typical form to be taken for it. Mounted speci-



mens differ from the form as described in the character and length of the hairs on the dorsum of the thorax and abdomen, and in the size and height of the pigmented spots from which they arise. The hair on the dorsum are very fine, arise from a pigmented spot which is not elevated and very small. The hairs are hardly longer than the width of the spots from which they arise, but vary some in length, they are fine and may be difficult to differentiate. The larger pigmented spots anterior to the transverse pigmented spots are as a rule free from hair, when free, they show clear area, which correspond to areas from which hairs arise when such are present. Such hairs are always short, but longer than those found on the dorsum which are about .01 mm. long. The hairs present on the pigmented spots are quite thick, and for the most part dull at the end. The hairs on the ventral surface are normal. Specimens of this form differ from typical specimens of *wahtolca* in the length of various parts of the antennae, legs and rostrum, but it is not known how significant these variations are.

Holotype, apterous viviparous female, deposited in the United States National Museum. Host *Pinus edulis*, Grand Canyon National Park, Arizona, June 15, 1954. The specimens were for the most part collected on small trees growing in the angle formed by the main road into the Park, and the road leading to the Park Air Port. *C. wahtolca* was the most common species of *Cinara* found on *Pinus edulis* in Arizona in early June 1954. It was common and present in great numbers on *Pinus monophylla* in Nevada. *Pinus monophylla* is a new host for this species.

Cinara villosa (G&P) subspecies *curtivillosa* n. subspecies.

This new subspecies of *C. villosa* (G&P) differs from the typical form *C. villosa* in having short hairs on the dorsum of the abdomen, in place of hairs of normal length. In this respect it is similar to the subspecies *C. curtivahtolca* described herewith, except for the fact that the hairs are somewhat longer on the average. Most of the hairs are more or less pointed, they appear to be normal, we do not think they have been worn off or perhaps clipped by ants.

Holotype apterous viviparous female. Taken on *Pinus flexilis* var *reflexa*, July 17, 1954. Summerhaven, Arizona. George D. Butler, Jr., Coll. This slide has been deposited in the United States National Museum.

Cinara juniperivora (Wilson).

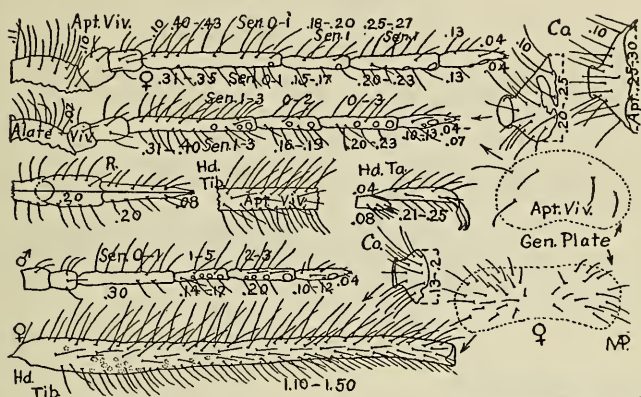
Cinara difficilis H&F 1931 new synonymy.

Explanations of Plates

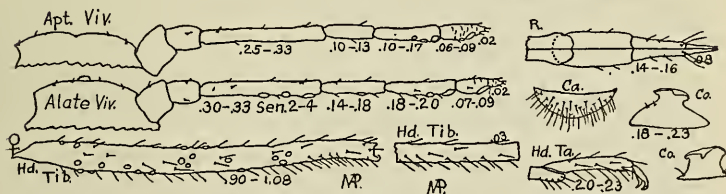
The descriptions of the forms figured on the plates published herewith, with the exception of the figure of *C. juniperi* (DeGeer) were published in previous volumes of this Journal, either by the writer or the writer and his associates. They have not been figured elsewhere, and none are described in Palmer's "Aphids of the Rocky Mountain Region," either because they were described after this work went to press, or because they are from regions without the limits of this work. The figure of *C. juniperi* (DeGeer) is from a slide now in the collection of Prof. E. O. Essig, which was checked by Dr. Hille Ris Lambers. Records of *C. juniperi* previously published in American literature may be ques-

tioned. This species can now be recorded from America, as determined by Dr. D. Hille Ris Lambers.

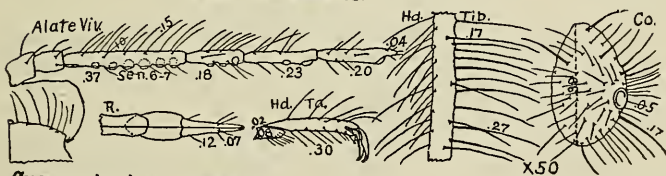
The author is aware that the species figured on the plates published herewith are not associated with the forms described in this paper as new subspecies. He merely takes this opportunity to publish them, for the benefit of other aphid specialists.



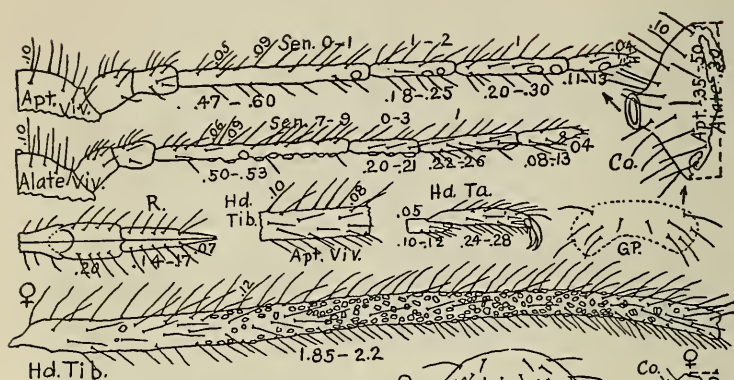
CINARA wahluca H.



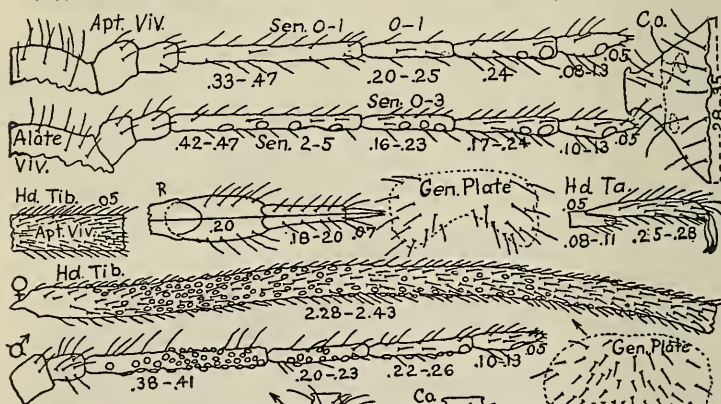
CINARA wahhaka H.



CINARA juniperi (DeGeer)



CINARA wahtolca H.



CINARA pinona H.